

(21) Application No. 7636/74 (22) Filed 19 Feb. 1974 (19)

(23) Complete Specification filed 18 Feb. 1975

(44) Complete Specification published 2 Feb. 1977

(51) INT. CL.² F16G 11/02

(52) Index at acceptance

E2A E6B



(54) ELASTIC ADJUSTABLE CORD FASTENER DEVICE

(71) I, ROGER BRYAN EMERY, a British subject of Fuchia Cottage, Glen Auldyn, Ramsey, Isle of Man, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to fastening devices and to an elastic adjustable cord tie device, particularly, though not exclusively, useful as a lashing of adjustable length which can be rapidly and securely fastened, and equally rapidly released, but which is reliably non-self-releasing, for securing yacht sails to a boom or forestay.

According to the invention there is provided a friction-grip type cord fastener comprising a body part having means at one end for anchoring one end of a cord, a nose at its other end, and having a through aperture between said ends, which nose is slotted longitudinally of the body over the whole of its length in a direction towards said aperture, the slot in the nose having side walls which are convergent over part of the depth of the slot and then divergent towards the base of the slot whereby a cord of appropriate thickness forced into the slot through the constriction formed between the convergent wall parts becomes entrapped in the portion of the slot below such constriction.

The various features and advantages of the invention will be apparent from the following description of one embodiment thereof given by way of example and illustrated in the accompanying drawings, of which:—

Figure 1 is a plan view,

Figure 2 is a side view, of a cord fastener with the cord shown in part only for convenience of illustration, and

Figure 3 is a section on the line III—III of Figure 1.

The fastener shown in the drawings comprises a body 1 of strong durable material such, for example, as nylon, having at one end a block 2 forming an anchor for one end of an elastic cord of the type com-

monly known as a shock cord. The body 1 has a central aperture 4 through which the free end of a cord may be passed, and a nose 6 at the end remote from the block 2, which nose is slotted at 7 lengthwise of the body 1. The aperture 4 is formed with a V-shaped groove 5 at the inner end of the slot 7 in the nose 6. As can best be seen from Figure 3, the slot 7 is of cylindrical shape at its base and then has divergent side walls extending to the outer face of the nose 6, the juncture between the cylindrical part and the divergent walls being the narrowest part of the slot. The widest part of the slot 7 and of the groove 5 are approximately of the same width.

When the fastener above described is embodied in a cord tie device as shown in the drawings, it has attached to it at its anchor end 2 an elastic cord 3. The cord 3 is shown in Figure 2 as having one end anchored in the block 2 and the other, free, end fastened in the fastener, the intervening part between the ends being omitted.

To use the device, the cord is passed round the article to be secured, the free end of the cord is threaded through the aperture 4 and laid across the slot 7, and then the cord is pulled tight so that it is extended, its diameter, at least in the region of the slot, is reduced by such extension, and the cord slips through the narrowest part of the slot to locate in the cylindrical portion.

By choosing a cord of which the diameter when unextended is greater than the diameter of this portion of the slot, it is ensured that the cord is gripped in the slot and held fast. Pulling on the free end of the cord when it is so trapped in the slot 7 enables it to be pulled further through the fastener to further tighten the lashing. Movement in the opposite direction is completely prevented by the V-shaped groove 5 which, at its widest part is preferably no more than the diameter of the cord when unextended.

It is important that the correct relative dimensions of the cord and the two parts of the slot be chosen. It has been found that with a cord of 5mm diameter the cylindrical part of the slot should have a dia-

55

60

65

70

75

80

85

90

95

100

meter of 4mm and the narrowest part of the slot should be 2.5mm wide, the groove 5 having a maximum width of 5mm.

5 WHAT I CLAIM IS:—

1. A friction-grip type cord fastener comprising a body part, having means at one end for anchoring one end of a cord, a nose at its other end, and having a through
10 aperture between said ends, which nose is slotted longitudinally of the body over the whole of its length in a direction towards said aperture, the slot in the nose having
15 of the depth of the slot and then divergent towards the base of the slot whereby a cord of appropriate thickness forced into the slot through the constriction formed between the convergent wall parts becomes entrapped in
20 the portion of the slot below such constriction.

2. A fastener as claimed in claim 1 wherein the side wall of said aperture adjacent the inward end of said slot is formed
25 with a V-shaped groove extending in the direction of the depth of said slot.

3. A fastener as claimed in claim 2 wherein said groove at its widest part is no wider than the widest part of said slot.

4. A cord tie device comprising a length
30 of cord having a fastener as claimed in any one of claims 1 to 3 anchored to one end of said cord by said anchor means, said cord having a diameter greater than the
35 width of the slot below said constriction.

5. A tie device as claimed in claim 4 wherein said cord is an elastic cord of such diameter when unextended that the cord has
40 to be stretched to be received in the portion of the slot below the constriction.

6. A friction-grip type cord fastener substantially as herein described with reference to the accompanying drawing.

7. A cord tie device substantially as
45 herein described with reference to the accompanying drawing.

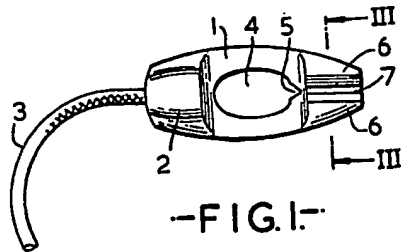
A. C. ASHTON & CO.,
3 Fenwick Street,
Liverpool, 2.
Agents for Applicant.

1463362

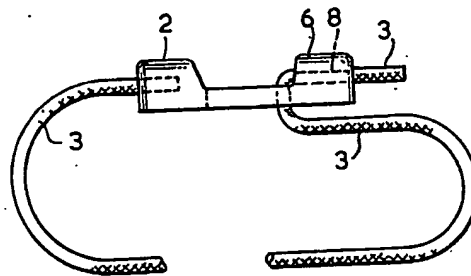
COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*



-FIG.1-



-FIG.2-



-FIG.3-